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Amendment
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Remarks

In the action, the drawings were objected to under 37 CFR 1.83(a); claims 14 and 21 were rejected under 35 USC 112, second paragraph; claims 1-13, 15, 18-20, 22, 25 and 26 were rejected under 35 USC 103(a) as being unpatentable over Whitby '787 (US 5,144,787) in view of Remensperger (US 3,915,282); claims 23 and 24 were rejected as being unpatentable over Whitby '787 in view of Remensperger and Carlson (US 3,915,282); and claims 14 and 21 were rejected as being unpatentable over Whitby '787 in view of Remensperger and Gotthardt et al. (US 1,808,134).

Claims 6, 14-17, 20, 22 and 24 have been canceled above. New claims 27-30 have been added. Claims 1-5, 7-13, 18-19, 21, 23 and 27-30 are now pending.

Drawings

The objections to the drawings are respectfully traversed.

Regarding claims 15 and 22, such claims have been canceled without prejudice to applicants right to assert that one or more of the pending claims is broad enough to cover a single conveyor.

Regarding claim 23 and the conveying system comprising an elevator, the elevator is shown in schematic form throughout the drawings at 20. 37 CFR 1.183(a) allows for such a block illustration in the case of certain components. It is not necessary for the understanding of one of ordinary skill in the art to have a detailed drawing of an elevator. Withdrawal of the objection is therefore requested.

Regarding claim 24, such claim has been canceled without prejudice to applicants right to contend that one or more of the claims is broad enough to cover a conveyor roller positioned along a guide rod for lateral movement therealong.

Claim Rejections - 35 USC 112

Claim 14 has been canceled. Applicants have amended claim 21 above to more clearly define the three section conveying system embodiment shown in Figs. 6A, 6B and 6C of the invention. Accordingly, withdrawal of the 112 rejection is requested.

Claim Rejections - 35 USC 103

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The rejection of claims 1-13, 15, 18-20, 22, 25 and 26 as being unpatentable over Whitby '787 in view of Remensperger is respectfully traversed.

Claim 1

Amended claim 1 is directed to a wrapping machine for wrapping trayed food products, comprising:

a wrap station at which trayed food products are wrapped;
a film dispensing station for drawing out film over trayed food products at the wrap station;
a conveying system for moving trayed food products along a defined path to the wrap station including:
 a first conveyor along a first portion of the defined path;
 a second conveyor along a second portion of the defined path, the **first conveyor having an output end which is aligned at a height with and feeds to an input end of the second conveyor** for feeding trayed food products traveling along the first conveyor to the second conveyor;
 at least one sensor for determining a lateral position of trayed food products moving along the first conveyor, **the sensor comprising an optical sensor arrangement positioned to avoid direct contact with trayed food items**;
 at least one actuator for controlling a relative lateral position of the output end of the first conveyor to the input end of the second conveyor;
 a controller for receiving signals from the sensor and for controlling the actuator, wherein, for a given trayed food product moving along the first conveyor, and based upon signals received from the sensor, the controller effects movement of the actuator to define a relative lateral position between the output end of the first conveyor and the input end of the second conveyor to place the given trayed food product in a desired lateral position on the second conveyor.

As an initial matter, amended claim 1 specifies that the first conveyor has an output end which is aligned at a height with and feeds to an input end of the second conveyor, as clearly shown in drawing Figs. 5A and 5B. The importance of this limitation cannot be overlooked in the context of food product wrapping machines, where sanitation is a major consideration. Often times the wrapping machines are used to wrap trayed meat products and it is important to prevent spillage of juices or food particles. Vertical alignment of the heights of the ends of the conveyors at the point of transfer is important to achieving this goal. In contrast, Remensperger teaches a conveying system in which the various conveyors 14, 16 and 18 are not located at the same

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height. Indeed, the conveyed product in Remensperger drops vertically from one conveyor 16 to the next conveyor 18. This type of conveying system is not well suited to wrapping machines used to wrap trayed food products, as it would likely result in one of a number of undesirable possibilities, including (i) the food product becoming completely separated from the tray, (ii) a portion of the food product spilling from the tray, or (iii) the food product and tray flipping upside down or on its side. Accordingly, one of ordinary skill in the art would not likely look to the teachings of the Remensperger to modify a food product wrapping machine as taught in Whitby '787 for at least these reasons.

Moreover, even when the teachings of Remensperger are combined with Whitby '787, the claimed invention does not result. As previously noted, Remensperger does not disclose first and second conveyors in which the output end of the first conveyor is aligned at a height with the input end of the second conveyor as required by the claim. Such an arrangement is not even suggested by Remensperger, as it is apparent that such a conveyor arrangement would not work effectively in connection with the dough products conveyed in the Remensperger device. Indeed, such a height aligned arrangement of conveyors would likely result in the loss or destruction of the dough product at the point of transfer. Likewise, Whitby '787 does not teach the first and second conveyor system. Accordingly, even when the conveying system of Remensperger is combined with the Whitby '787 wrapper, the claimed invention does not result.

Further, claim 1 expressly requires that the sensor system comprise an optical sensor arrangement positioned to avoid direct contact with trayed food items. In contrast, if the Remensperger conveyor system were modified such that the output end of the first conveyor was aligned at a height with the input end of the second conveyor, the optical sensor arrangement taught by Remensperger would end up being located in a position that the trayed food items would run into one or more of the sensor parts 58, 60, 62 or 64 because in Remensperger they must be positioned at the same height as the items conveyed (see Fig. 16). The sensor arrangement taught by Remensperger only works in its conveying system due to the fact that the conveyors are not positioned at the same height, allowing the food product to drop from one conveyor onto the next.

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In summary, one of ordinary skill in the art would not look to the teachings of Remensperger due to the problems associated with conveying trayed food items using the multi-height conveyors of Remensperger. Moreover, when Remensperger is combined with Whitby '787, the claimed invention does not result due to the lack of both (i) a first conveyor having an output end aligned at a height with the input end of a second conveyor and (ii) an optical sensor arrangement positioned to avoid direct contact with trayed food items. In order to achieve the invention of claim 1, one of ordinary skill in the art would have to progress through a three step modification: first, select the Remensperger conveying system for use in the Whitby '787 wrapping machine; second, modify the Remensperger conveying system so that the multiple conveyors are at the same height; and finally, third, modify the Remensperger sensor system to a design that would not come into direct contact with trayed food items. It is applicants contention that this multi-step modification places the claimed invention well beyond the reasonable teachings that might be considered obvious in view of the combination of the combined teachings of Whitby '787 and Remensperger. Accordingly, claim 1 is patentably distinguishable over the combination and withdrawal of the rejection is requested. Likewise, dependent claims 2-5, 7-11 and 27-28 are patentable for at least the same reasons.

With respect to new claims 27 and 28, and as described in further detail below relative to claim 18, none of the references relied upon by the examiner teach or suggest a conveying system in which "the actuator is connected for moving the output end of the first conveyor along a laterally extending axis while an input end of the first conveyor remains laterally stationary" (claim 27) or in which "the actuator is connected for moving the input end of the second conveyor along a laterally extending axis while an output end of the second conveyor remains laterally stationary" (claim 28). Accordingly, such claims are patentable for this additional reason.

Claim 12

Amended claim 12 is directed to a trayed food product wrapping machine for wrapping packages, comprising:

a wrap station at which trayed food products are wrapped;

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a film dispensing station for drawing out film over trayed food products at the wrap station;

a conveying system for moving trayed food products along a path to the wrap station, the conveying system being selectively adjustable for varying a lateral position of trayed food products traveling along the path, the conveying system including a first conveyor along a first portion of the defined path, a second conveyor along a second portion of the defined path, the first conveyor having an output end which is aligned at a height with and feeds to an input end of the second conveyor for feeding trayed food products traveling along the first conveyor to the second conveyor;

at least one sensor for determining lateral position of trayed food products; a controller for receiving signals from the sensor and for controlling adjustment of the conveying system, wherein, for a given trayed food product moving along the path, and based upon signals received from the sensor, the controller effects adjustment of the conveying system to define a relative lateral position between the output end of the first conveyor and the input end of the second conveyor so as to establish a desired lateral position of the given trayed food product when the given trayed food product reaches the wrap station.

Thus, like claim 1, claim 12 requires that the first conveyor has an output end which is aligned at a height with and feeds to an input end of the second conveyor, as clearly shown in drawing Figs. 5A and 5B. Accordingly, claim 12 is allowable over the combination of Whitby '787 and Remensperger for the same reasons noted above with respect to such limitation in claim 1. Withdrawal of the obviousness rejection of claim 12 is therefore requested. Claims 13 and 29-30 are patentable for at least the same reasons.

With respect to new claims 29-30, and as described in further detail below relative to claim 18, none of the references relied upon by the examiner teach or suggest a conveying system having "an actuator that is connected for moving the output end of the first conveyor along a laterally extending axis while an input end of the first conveyor remains laterally stationary" (claim 29) or having "an actuator that is connected for moving the input end of the second conveyor along a laterally extending axis while an output end of the second conveyor remains laterally stationary" (claim 30). Accordingly, such claims are patentable for this additional reason.

Claim 18

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Amended claim 18 is directed to a package wrapping machine, comprising:

an infeed station;

a wrap station;

a conveying system configured to move the packages along a path from the infeed station to the wrap station, the conveying system including a first conveyor having an output end to feed packages to an input end of a second conveyor, the first conveyor including an actuator connected for moving the output end of the first conveyor along a laterally extending axis while an input end of the first conveyor remains laterally stationary and while the input end of the second conveyor remains laterally stationary;

a sensor configured to detect a lateral position of packages; and

a controller configured to receive signals from the sensor and to control the actuator to provide selective lateral adjustment of the output end of the first conveyor so as to define a relative lateral position between the output end of the first conveyor and the input end of the second conveyor to place the certain packages in a desired position when they reach the wrap station.

Applicants note that none of Whitby '787, Remensperger, Carlson or Gotthardt et al. teach or suggest a conveying system with a first conveyor having an output end to feed packages to an input end of a second conveyor, the first conveyor including an actuator connected for moving the output end of the first conveyor along a laterally extending axis (see for example the axis 36 of the embodiment of Fig. 2) while an input end of the first conveyor remains laterally stationary and while the input end of the second conveyor remains laterally stationary (again see the embodiment of Fig. 2). Remensperger teaches a system in which the entire conveyor 16, including both ends thereof, is moved laterally; Carlson teaches a system in which the entire shifter (see spaced apart rails 60) is moved laterally; and Gotthardt teaches a system in which the output end of the straight section 14 of the conveyor is actually moved along an arcuate type path. Thus, none of the cited references disclose a conveying system as required by claim 18. Applicants further submit that the references, whether taken alone or combined, do not teach such a conveying system configuration in general, let alone in a wrapping machine as claimed. Accordingly, claim 18 is patentably distinguishable over the cited references and withdrawal of the rejection of claim 18 is requested.

Claim 25

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Amended claim 25 is directed to a package wrapping machine, comprising:

a wrap station;

a conveying system configured to move the packages along a path to the wrap station, the conveying system including a conveyor and an actuator connected for moving one end of the conveyor along a laterally extending axis while an opposite end of the conveyor remains laterally stationary;

at least one sensor configured to detect a lateral position of packages; and a controller configured to receive signals from the sensor and to control the actuator to provide selective lateral adjustment of the conveying system to position at least certain of the packages in a suitable lateral position for wrapping at the wrap station.

As noted above with respect to claim 18, none of Whitby '787, Remensperger, Carlson or Gotthardt et al. teach or suggest a conveying system a conveyor an actuator connected for moving one end of the conveyor along a laterally extending axis while an opposite end of the conveyor remains laterally stationary (see for example the axis 36 of the embodiment of Fig. 2). Accordingly, claim 25 is patentably distinguishable over the cited references, and claim 26 is patentable for at least the same reason.

Claim 23

Amended claim 23 is directed to a package wrapping machine, comprising:

an infeed station;

a wrap station;

a conveying system configured to move the packages along a path from the infeed station to the wrap station, at least a portion of the conveying system being selectively adjustable laterally to controllably vary a lateral position of at least certain of the packages traveling along the path;

a sensor configured to detect a lateral position of packages; and a controller configured to receive signals from the sensor and to control the selective lateral adjustment of the conveying system to position at least certain of the packages in a desired position when they reach the wrap station;

wherein the conveying system comprises an elevator that is laterally adjustable relative to a substantially horizontal conveyor, the elevator separate from and positioned adjacent the output end of the substantially horizontal conveyor and moving packages from the output end upward to the wrap station.

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Applicants respectfully submit that the combination of Whitby '787, Remensperger and Carlson does not render claim 23 obvious. In particular, neither Whitby '787 nor Remensperger disclose a laterally movable elevator. While Carlson does disclose a conveyor having a shifter that is raised upwardly between rollers of the conveyor to move load laterally, the Carlson shifter is integrated with a horizontal conveyor as opposed to being separate from the horizontal conveyor as required by claim 23. Accordingly, claim 23 is patentably distinguishable over the cited combination.

Conclusion

In view of the foregoing, applicants respectfully request allowance of all pending claims.

If the Examiner wishes to discuss any aspect of this Amendment, please contact the undersigned attorney at the telephone number indicated below.

Respectfully submitted,


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